

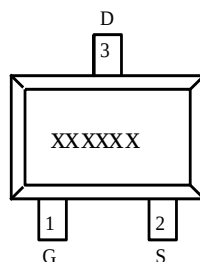


3418 (文件编号: S&CIC0937)

POWER MOSFET WAFER DATASHEET

Feature

- 30V P-channel MOSFET High Dense Design.
- Ultra low On-Resistance.
- $R_{DS(ON)} < 53m\Omega$ @ $V_{GS} = -10V$
- $R_{DS(ON)} < 65m\Omega$ @ $V_{GS} = -4.5V$
- Reliable and Rugged
- Gross die: 38K



SOT-23

Applications

- Power Management in Notebook Computer, Portable Equipment and Battery Powered Systems.

Die Description

- Wafer Diameter: 8 inches. (± 0.1 inches)
- Wafer Thickness: 8 mils. (± 0.6 mils)
- Die Size: $960\mu m \times 810\mu m$. (Including scribe line)
- Scribe Line Width: $60\mu m$
- Metallization: Frontside: AL/Cu, Backside: Ti/Ni/Ag.
- Metal Thickness:
Frontside: $4\mu m$, Backside: $1.4\mu m$.
- Bonding Area:
Gate: $120\mu m \times 120\mu m$.
Source: Full metalized surface of source region
- Recommended Wire Bounding
Gate: $1.5mil \times 1$ Au
Source: $1.5mil \times 4$ Au or $2mil \times 3$ Au

Electrical Characteristics (Wafer Type)

1. Absolute Maximum Ratings ($T_A = 25^\circ C$ Unless Otherwise Noted)

Symbol.	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	-30	V
V_{GSS}	Gate-Source Voltage	± 12	
I_D	Continue Drain Current	-4	A
I_{DM}	Pulsed Drain Current	-15	
I_S	Diode Continuous Forward Current	-1	A
T_J	Maximum Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature Range	-55 to 150	
$R_{\theta JA}^b$	Thermal Resistance-Junction to Ambient	150	$^\circ C/W$



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2. Static Electrical Characteristics. (TA=25°C Unless Otherwise Noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit.
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =250μA	-30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-24V, V _{GS} =0V			-1	μA
		T _A =25°C		-30	-30	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =250μA	-0.6	-0.8	-1.1	V
I _{GSS}	Gate Leakage Current	V _{DS} =±12V, V _{GS} =0V			±100	nA
R _{DS(ON)}	Drain-Source On-state Resistance	V _{GS} =-10V, I _{DS} =-0.5A		43	53	mΩ
		V _{GS} =-4.5V, I _{DS} =-0.5A		50	65	
		V _{GS} =-2.5V, I _{DS} =-0.5A		60	100	
V _{SD}	Diode Forward Voltage	I _{SD} =-1A, V _{GS} =0V		-0.7	-1.3	V

Note:

- a: Current maybe limit by bonding wire.
- b: The R_{θJA} is the sum of the thermal impedance from junction to ambient and depend on package type.
- c: SOT23-3L package and surface mounted on 1 in² pad area, t ≤ 10 sec.
- d: Pulse test; pulse width ≤ 30 μs, duty cycle ≤ 2% (T_A=25°C Unless Otherwise Noted)